

Claims

- [c1] What is claimed is:
1. An open hem flange for a vehicle comprising:
- an inner panel; and
- an outer panel having a first outer portion and a second inner portion, the second inner portion being folded about the inner panel at a base of the inner panel, the inner panel having a plurality of dimpled sections for providing a standoff to the second inner portion of the outer panel.
- [c2] 2. The open hem flange of claim 1 wherein the
- the second inner portion of the outer panel and the inner panel define a gap in-between.
- [c3] 3. The open hem flange defined in claim 1 wherein the plurality of dimpled sections are evenly spaced along the edge of the inner door panel.
- [c4] 4. The open hem flange defined in claim 1 wherein
- an adhesive is disposed between the first outer portion of the outer panel and the inner panel.
- [c5] 5. The open hem flange defined in claim 1 wherein the outer portion of the outer panel and the inner panel define a second gap in-between the outer portion of the outer panel and the inner panel.
- [c6] 6. The open hem flange defined in claim 5 wherein
- the adhesive is an expandable adhesive.
- [c7] 7. The open hem flange defined in claim 5 wherein the adhesive is a non-expandable adhesive.
- [c8] 8. A method for manufacturing an open hem flange, the method comprising the steps of:
- stamping an outer sheet metal panel to include a
- border flange along the periphery of the outer sheet panel;
- stamping an inner sheet metal panel to include a plurality of dimples along the lower portion of the inner sheet metal panel;

nesting the inner sheet metal reinforcing panel within the outer sheet metal panel;

positioning the outer sheet metal panel to the inner sheet metal reinforcing panel by dimpling the periphery of the inner sheet metal reinforcing panel against the outer sheet panel;

electrocoating the door structure;

applying stick adhesive between the outer sheet metal panel and the inner sheet metal reinforcing panel;

heating the door structure and the stick adhesive so that the stick adhesive melts into the door between the outer sheet metal panel and the inner sheet metal reinforcing panel; and

securing the outer sheet metal reinforcing panel to the inner sheet metal reinforcing panel as the adhesive bonds to each surface.